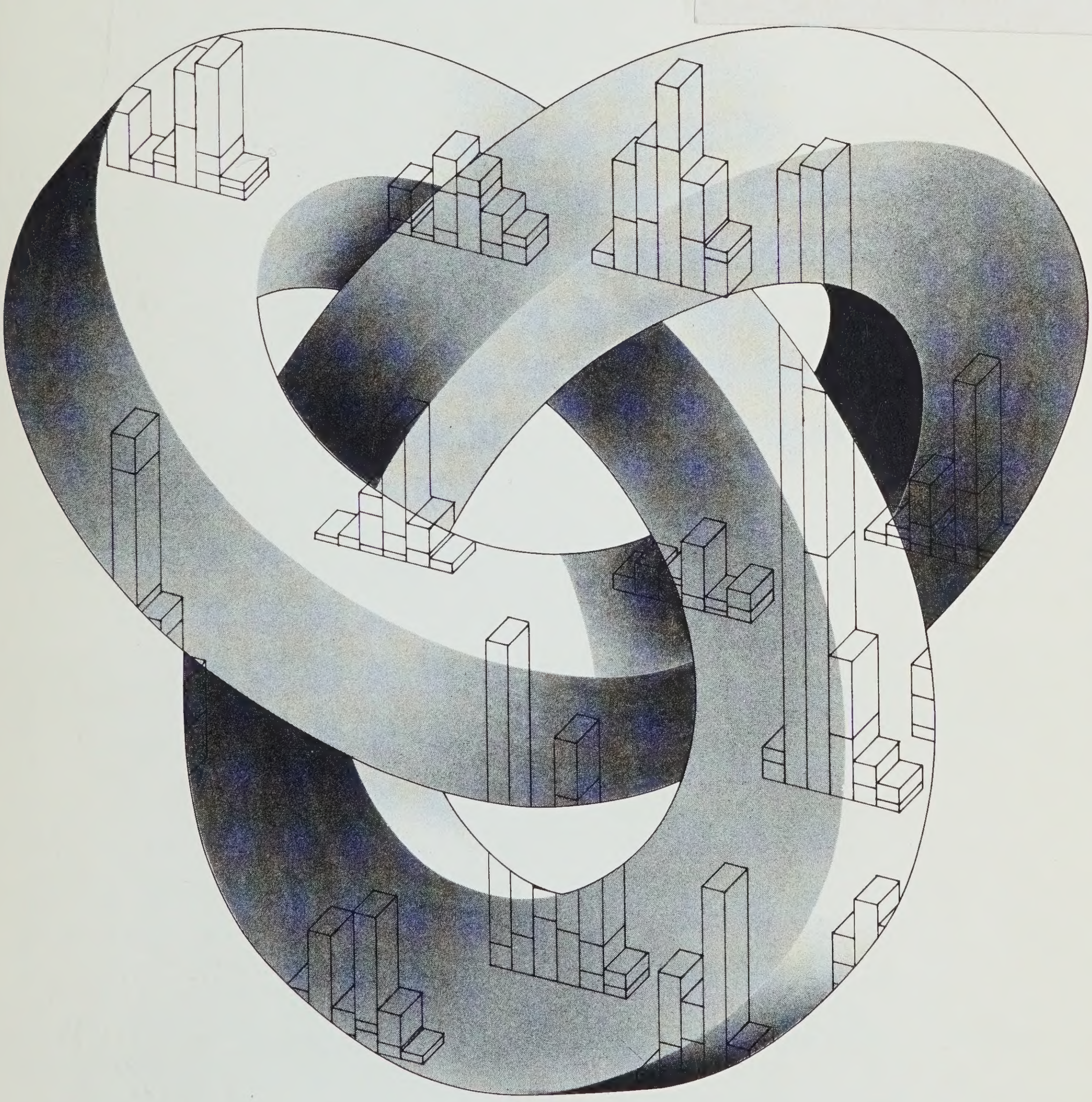
Ontario

FUTURE SCENARIOS FOR ONTARIO



Production

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Abstract:

This paper examines the organization of production in Ontario as it is in the early 1980s, and attempts to predict how the situation might change in the future, under low and high economic growth. In each case, comments are added, describing decisions and developments that might increase or reduce the viability of Ontario's production organization.

Specifically mentioned are the auto, steel, resource and high-tech industries. Industry in general is discussed with respect to productivity, multinationals and government intervention. Changes in the labour force, unemployment and some social responses are considered.

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-- Production --

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FOREWORD

As part of the Transportation Outlooks project, seven papers were commissioned, dealing with well-defined themes of major significance to the future development of Ontario. Under the main heading Future Scenarios for Ontario, the titles of the papers are as follows:

1/ The Environment
2/ Resources Sector
3/ Production
4/ Multinational Corporations
5/ Social Values and Behaviour
6/ Political Change
7/ Preliminary Assessment of New Technologies

The papers were commissioned from experts, several of them of national or international renown, in various fields. It is expected that their work, and additional material related to it, will be used in the development of a number of alternative scenarios of Ontario's prospects. The main objectives are to stimulate thinking about the future and to elicit feedback from MTC planners and other users of such information in order to guide further studies of the future, that are both relevant and timely.

It should be noted that these papers, which were completed in June 1982, are primarily the speculations or opinions of experts, not statements of fact. It should also be clear that a different choice of experts would have produced another set of opinions. Part of the process of anticipating future change is the painstaking analysis of detail, including quantitative information, and the expert assessment of emerging and disappearing trends and other qualitative information. Another part is the careful integration and synthesis of all these different types of information. Futures research requires the involvement and participation of all users to improve on the application of futures information to current decision-making.

Most of the reports delineate events as they would develop if Ontario, Canada, and the world were to follow two broadly different futures: low growth and high growth, as described in the following.

Low Growth

This future assumes an economic environment characterized by continued slow economic growth and attempts to reinforce the existing industrial structures globally and locally. The gap between North and South continues to widen, and there is little change in conditions in the Third World. Also, relations between East and West continue to be strained. At the same time, attempts to liberalize trade and capital movements as well as reform the international monetary system will be piecemeal and sporadic.

High Growth

The main features of this environment are more rapid economic growth and attempts to harness the new technologies (e.g., micro-electronics, biotechnology, oceanography, etc.) in building a new industrial structure globally and locally. The assumptions include greater co-operation between East and West, and North and South, with rapid improvements in the conditions of the Third World. At the same time, there will be strong and relatively successful attempts to liberalize trade and capital movements as well as reform the international monetary system.

Two of the reports are based on different pre-conditions. In the case of Preliminary Assessment of New Technologies, the two scenarios were simply omitted, and an assessment was done of the potential of developing a high-technology future for Ontario. The paper Political Change deals with two main scenarios and a third scenario which considers an overlay on each of the preceding two. One pre-condition -- in effect, an amalgamation of two alternatives -- was given for this paper and is as follows.

> Assume a competitive world environment (politically and economically) with slow rates of economic growth for most nations, a high priority for more economically successful countries to re-industrialize using high technology, and serious international competition for resources and markets. There will be winners and losers nationally, as well as by and within industrial sectors.

ABSTRACT

This paper examines the organization of production in Ontario as it is in the early 1980s, and attempts to predict how the situation might change in the future, under low and high economic growth. In each case, comments are added, describing decisions and developments that might increase or reduce the viability of Ontario's production organization.

Specifically mentioned are the auto, steel, resource and high-technology industries. Industry in general is discussed with respect to productivity, multinationals and government intervention. Changes in the labour force, unemployment and some social responses are considered.

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1/ INTRODUCTION

The purpose of this paper is to examine the organization of production in Ontario as it is now in the early '80s, and to predict how the present situation might change under two different sets of conditions.

The first set of conditions assumes continued slow economic growth, with mainly defensive government policies aimed at reinforcing the existing industrial structure. It also assumes that the gap between North and South continues to widen, there is no appreciable change in the Third World, and relations between East and West continue to be strained.

The second set of conditions assumes more rapid economic growth, with efforts to harness new technology to build a new industrial structure. There are improved relations between North and South, and East and West, with rapid improvements in the condition of the Third World.

In each case, comments have been appended describing events, decisions and developments that might increase or reduce the viability of Ontario's production organization.

2/ CURRENT SITUATION

In 1980, the value of Gross Domestic Product (GDP) was $98 billion, which represents 38.9% of the figure for the whole of Canada. This does not include value produced by the informal or black economy, which would probably add another $10 billion to this figure. This part of the economy is even starting to become legitimate, with organized barter companies, but it is still predominantly illegal and unreported. Studies indicate it is in the range of 5% to 15% of GDP.

In real terms, Ontario's production over the last 10 years has increased by 38% and, as a percentage of Canada's total production, has fallen by only 3%. Considering the growth of Alberta and British Columbia, this 3% drop is surprisingly small. Table 1 shows Real Domestic Product (RDP) broken down by industry sector for 1970 and 1980.

In the 1982 recession, Ontario fared badly, with unemployment in the 9-10% range. When the number of government employees is considered, however, along with the Job Sharing programme offered by the Ontario government, unemployment in the private sector might have been as high as 20%.

In spite of this high unemployment rate, there is still a shortage of skilled employees. This includes engineers, toolmakers, computer programmers, tradesmen and electronics technicians. In the past, immigrants have been relied on to help fill these positions. The standard of living is not now so relatively attractive, and the supply is drying up. At the same time, demand is increasing as technology advances. This is creating a training and education problem for the province. Ontario exports about 25% of its GDP, with 70% of this going to the U.S. It is natural, therefore, that the economy of Ontario has followed that of the U.S. Since Ontario is more dependent on exports than the U.S., it suffers more in an economic downturn when countries favour domestic product.

Table 1/ Ontario Real Domestic Product

(Millions of Constant 1971 Dollars)

	1970	1980
Goods-Producing Industries	13 952 (42.4%)	17 186 (37.9%)
-- Primary	1 493 (4.5%)	1 385 (3.1%)
-- Manufacturing	9 777 (29.7%)	12 930 (28.5%)
-- Construction and Utilities	2 682 (8.2%)	2 872 (6.3%)
Service Sector	18 943 (57.6%)	28 121 (62.1%)
-- Commercial Services	10 042 (30.5%)	15 548 (34.3%
-- Community, Business and Personal Services	6 590 (20.0%)	9 687 (21.4%)
-- Public Administration and Defence	2 311 (7.0%)	2 886 (6.4%)
Total Economy	32 894 (100.0%)	43 306 (100.0%)
Share of Total Canada (%)	41.8%	38.9%

Source: Conference Board of Canada

Within Canada, the largest single market is Toronto, taking about 18% of the product, followed by Montreal at 14%. The rest is widely distributed throughout Canada.

It is interesting to note that, in general, in the last 10 years, the service sector has been growing faster than goods-producing industries and has gone from 57.6% of the total to 62.1%.

The total labour force in Ontario is about 4.5 million people, out of a population of 8.6 million (51%). The percentage of women in the workforce has increased from about 34% 10 years ago to 41% today. There is also a growing trend towards part-time work, with about 70% of part-time workers being female, and 50% of all part-time workers being under the age of 25. This is contributing to a higher participation rate as families try to compensate for declining real incomes. Clearly, these trends will have implications for industry in the areas of flexible work hours and filling one job with more than one employee.

In general, the working population locates where there is work. Once a large skilled labour force is built up in an area, this, in turn, attracts other industry and service organizations. Some primary industries, such as mining, forestry, and pulp and paper, must naturally centre around their raw material supplies; others have tended to focus on metropolitan centres, such as Toronto, Hamilton and London. Newer high-tech industries have followed a U.S. trend of locating close to each other, for example, Ottawa's "silicon valley." This gives rise to a few well-developed industrial centres with relatively undeveloped rural and agricultural areas between. Although transportation is a major problem in a large country such as Canada, at least this tendency to centralize simplifies the problem.

Production is still mainly the domain of the incorporated company, and this is not likely to change in the years ahead. Governments have become involved in some areas other than essential services, such as the Canada Development Corporation (CDC), Petro-Canada, and Suncor, but this does not seem to have gained public acceptance. There are now moves to return the CDC to the public.

There is a major cashflow crisis in the private sector, with interest rates at about 20%. This penalizes those companies that have been the most aggressive in expanding, either through acquisition or new capital programmes. Dome Petroleum Ltd. is the most obvious example, but there are many others. At the same time, a policy of Canadianization of industries, through the Foreign Investment Review Agency (FIRA) and preferential treatment, has resulted in less foreign capital investment.

Companies in trouble are turning to governments for help. Following the precedents set in the auto industry, there are requests for protection from competition, equity participation, loan guarantees and grants, with the chance of success appearing to depend on size, not merit.

Both in dollars and people employed, the automotive industry is by far the most important industry in Ontario, but it is being hurt by the trend to smaller cars, cheaper imports, and, perhaps, a tendency for the U.S. parents to restrict Canadian production before U.S. production. Since this sector represents more than 15% of Ontario's GDP, and through its impact on other sectors, affects, perhaps, another 30% to 40%, it is critical to the health of the province.

Mineral production (also very depressed), iron and steel, petroleum refining (high dollars, but few people), machinery manufacturing and pulp and paper are also very significant, but individually these are each less than one-third of the size of the auto industry, in terms of value of shipments.

The existing labour climate is one of increasing unionization, with 30% of the total labour force now organized. In spite of a recognized need for some less destructive way of reaching agreement, none has been found, and strikes or threats of strikes or plant closures continue to be the chosen route.

It is against this rather dismal background (considered in the summer of 1982) that the future of Ontario's production is forecast.

3/ LOW-GROWTH SCENARIO

3.1/ Key Features

It is assumed, in this scenario, that there will be no major changes in the world. Existing industries will be supported through protectionism and subsidies.

The inevitable result of such a policy will be:

- a reduction in risk capital for the formation of new business, especially from foreign sources;
- an increasing inability to compete internationally due to the inefficiency of protected industries;
- a continuing decline in real incomes and the standard of living; and
- increasing involvement of government in production as industries require support to survive.

This will also strain the treasury and result in higher taxation, reducing income and aggravating the whole situation.

In this environment people are discouraged. There is a tendency to be less productive. More family members will work, some part-time, to try and raise real family income. Mothers with young children will require day-care facilities so that they can participate; some may co-operate by looking after one another's children, to allow each other to fill part-time jobs with different hours.

Some services may be more in demand. With more husbands and wives both working, there will be an increased demand for part-time domestic help. Other services, such as lawn care and home repairs, may be required by the working professional couple, allowing non-professionals to obtain more part-time work.

Middle- and lower-income families will increase the present trend towards "do it yourself," rather than hiring tradesmen. This will result in good markets for firms that supply the home handyman. It is interesting to note that Canadian Tire Corp. Ltd. is one of the few corporations to improve its results in the present recession.

With increased taxation and more personal-service work, there will be a much greater tendency to personal cash transactions not reported as income for taxes, and an increase in the black side of the informal economy. Since consumption of alcohol and betting tend to increase in hard times, it is likely that illegal activities, such as drug trafficking and prostitution, which are also part of the informal economy, will also increase.

Recently, legal barter companies have come into being in Ontario. These operate by putting members in touch with each other when one needs goods or services another supplies. Credits are recorded when goods or services are provided, and used up when goods or services are received. At regular intervals, cash is transferred to balance the difference between credits received and used. This tendency will likely grow, but will not become a major factor in the economy. Ultimately, the credits they issue are another form of currency, and since they operate legally and pay sales tax on value, their final effect is simply the stimulation of mutual trade.

Industry will, more than ever, be short of skilled professional and trades people. The reward system, particularly under heavy taxation, is not sufficient to encourage enough people to spend their own time to become qualified. The declining standard of living will discourage immigration from Europe. In this situation, internal training programmes will become increasingly important for corporations.

A problem that must be solved is how to retain the personnel trained by a company. Even today, tradesmen trained by one company often leave to join companies that do not do their own training. Having skilled tradesmen will give a firm a competitive edge, so it is likely that some way of ensuring a return on this investment, or of equalizing training costs by levying non-training companies, will be found.

There will be another kind of shortage at the bottom end of the employment scale. Dirty, unpleasant or socially-unacceptable jobs will be hard to fill. This will include such things as auto assembly, foundry work and garbage collection. This is already happening and, in Japan, part of the motivation for robotization of automotive assembly and similar jobs is that fewer people are willing to do this work. Automation will provide one answer for Ontario, but will be adopted more slowly than in the U.S. or Japan. Part of the reason for this is relatively low research and development efforts compared to other developed countries, and playing "follow the leader" rather than trying to be the leader. Even when research and development efforts achieve success, it is often the U.S. that takes the idea and develops it into a commercial proposition. Where undesirable jobs cannot be automated, higher rates will have to be paid to fill them.

In the low-growth environment, unions are going to be placed on the defensive. This will lead to an increase in labour disputes and the kind of leap-frogging wage settlements that have characterized U.K. labour relations. This, in turn, will lead to higher inflation, with everyone agreeing they should get off the roundabout and no one willing to be the first. This situation will lead to pressure on the government to introduce wage and price controls, further reducing initiatives of firms and individuals to expand or become more productive.

This environment will tend to make Canada less productive and less competitive in international trade. It is likely that the dollar will devalue to a point beneficial to the natural-resource industries, but there will not likely be a ready market for secondary manufacturing.

To be successful in this environment, production organizations must buck the trend. This will require flair and entrepreneurial ability of the kind normally associated with a smaller corporate entity led by its founders. Large established companies and divisions of foreign multinationals will be following conservative courses in Ontario, and will be expanding their ventures in friendlier economies.

Geographically, it is not likely that there will be many changes. In tough times, resource industries tend to extend the life of existing

properties through local development or exploration. This will leave Timmins, Sudbury, Thunder Bay, Fort Frances, Sault Ste. Marie, Cochrane, Dryden and a few others as the mining and pulp and paper centres of Ontario. Elliot Lake could be in jeopardy since there are now many other uranium deposits that can be mined much more economically. It is only the existence of long-term cost plus supply contracts that is keeping this community alive now.

Hamilton, Nanticoke and Sault Ste. Marie will continue to be the steel-producing centres and they may strengthen their market position with the closing of some U.S. mills.

The reduction of auto production in Canada, including the possible disappearance of one of the big three, will be a blow to Ontario. This will result in Ontario becoming one of the less fortunate provinces, with unemployment remaining above 10% and new depressed areas.

Although eating out will continue to be popular and will probably increase as more members of one family work, people will be looking for better value. Fast food outlets are likely to boom; there will still be the very rich to frequent the exclusive dining rooms, but the upper range of the formal restaurant will suffer. This situation is already starting to occur. Food businesses such as Mother Tucker's, McDonald's and Harvey's are likely to flourish, along with the fast-food lunch outlets in office employment areas, but the new steak house, or Italian restaurant or similar, aiming at the evening trade from upper-middle income groups, will struggle. One problem will be the restrictions companies will place (and are already placing) on expense-account entertaining. These comments assume there will be no major changes in spending and saving patterns. In fact, in poor times, as are predicted here, there is a tendency for people to increase their minor indulgences, such as smoking, drinking, betting and inexpensive dining out. There is also a feeling that saving money is not very worthwhile, since it won't be worth much in a few years anyway.

Even though Canada is unlikely to remain in the forefront, technology advances in the world will have their impact in the increased use of

programmable devices in business and increased use of computers in the home. The limiting factor here will be people rather than hardware or software. It is educating and training people to use these devices that will determine how rapidly or effectively they can be introduced. Technology already exists that is not being put to good use because people do not understand how to use it. Existing computer installations have, in many cases, caused problems rather than solved them, due to ignorance in their use. This is a tough problem to solve. In a specific situation, a firm can provide training and solve a specific problem. To raise general awareness of the possibilities of advanced technology will probably take a generation of about 15 to 20 years. By then, of course, there will be another stage of technology development that will require further years to be understood. This gap between availability and effective use will always exist and is one of the reasons why Third World countries cannot catch up overnight. It will be important to try and reduce this gap through better public education. The need to continually update employees will be a significant one, and it may be that some interplay between the education field and industry may be developed to fill this need.

The willingness of people to change and to accept new ideas is greatly overestimated by those forecasting markets for new technologies. This will result in a much smaller market for information and communications systems of the Telidon type than is currently anticipated. The market will tend to be young families who have grown up used to the microcomputer and word-processing units now available. The older generations will be hard to change.

People's tastes will be tempered by what they can afford. Although the trend has been towards more options and increased luxury goods, tough times will put the emphasis on value. For the automotive industry, this will mean cars with more standard features, but fewer optional extras. This is the route Japan has already taken with great success, including radial tires as standard equipment, for example.

Housing will tend to downsize as well as cars. With high mortgage rates continuing (they must with high inflation), the trend will be to cheaper smaller homes, with an increase in townhouses and semi-detached units.

Gardens will become smaller as people have less time to spend in them and, again, try to reduce property costs.

There will be a crisis in rental accommodation. Many more people will be unable to purchase their own homes. Good property cannot be rented at a rate these people can afford. In fact, there will be working Canadians who cannot afford adequate shelter. Rent controls will simply aggravate the problem by preventing new rental accommodation from giving a fair return on investment. New rental property will, therefore, simply not be built. This will force the government to somehow fill the gap, either through rent subsidies, or through the building of properties for low rental to qualified tenants.

On the people front, Canada may well suffer from a "brain drain" similar to that experienced by the U.K. a decade or more ago. Both the U.S. and Europe may appear attractive to professionals who will see opportunities for a higher standard of living. Since these countries will be short of some categories of professionals, they will start to seek them here, as Canada has sought them from other countries in the past.

The poor investment climate and "brain drain" will aggravate the flight of capital from Canada, perhaps to a point where it will be necessary to impose some form of currency restriction to protect the value of the dollar.

The size of production units will tend to be smaller than now. This will occur since the multinationals, the most likely source of large world-scale plants, will be discouraged from expanding in Canada and will build elsewhere, and may even close existing Ontario facilities. Smaller, focussed factories specializing in a limited market (high-technology, for example) may still be able to make it in international trade, particularly if the government provides them with some advantage. Other production units will be largely supplying domestic markets and will not, therefore, be of world scale.

The birth rate will continue to decline, and as the baby-boom children age, the ratio of older people to younger will increase. Around the turn of the century, this "bulge" will start to reach retirement age, and the

pattern will stabilize at about 0.2 retirees per working employee. This compares to about 0.155 now, an increase of over 20%. Since life expectancy will also increase, the additional burden on social services will be greater than this. This will have tax implications, increase Canada Pension Plan (CPP) contributions, and provide a larger market for those services used by the elderly. If indexed pensions become the norm, the financial impact will be greater; if they do not, then under high inflation, many of the elderly will be forced to fall back on social programmes for help. Either way, the wage earner ends up paying.

Government will continue to grow, if for no other reason than to service the various social programmes that become increasingly necessary in a sick economy. This will, in turn, increase the tax burden and make matters even worse. Government will, naturally, be unpopular, and the party in power will lose support. The political balance will continue to oscillate so that the tendency will be to change parties at each election, both federally and provincially. This political instability will add to the negative factors already operating.

3.2/ Summary -- Production in 2010

It is hard to conceive that a series of negative protectionist policies could be allowed to continue for 28 years. If they do, the preceding discussion argues that they will produce a snowballing effect that will leave Canada (and Ontario) as a second-rate international producer overloaded with a top-heavy government and excessive social services.

The standard of living will be well below that of the U.S., Europe and Japan and will probably have been overtaken by South Korea and some other countries.

The best professionals will be tempted to move to these countries that will offer a more intellectually stimulating environment and far greater material rewards. Skilled technicians and tradesmen, who will be in demand world-wide, will also be leaving Canada.

The much smaller population of school-aged children will have caused some school and university closings; however, the increased need for continual training and retraining of employees to fill professional and skilled-trades needs, plus vocational training in the use of new office and plant equipment, may balance this off. It is even possible that government and industry will get together to use the redundant educational facilities.

Geographically, there may not be much change. Elliot Lake could be a ghost town, but the other natural resource centres should still be doing well. In fact, natural resource industries will be among the very few industries to prosper. Industry will still be clustered around the same metropolitan centres for the same reasons.

There will be more old people, nursing homes and companies involved in catering to the needs of the elderly, for example, pharmaceutical companies, old people's homes and inexpensive tourism.

The auto industry will have reduced to, perhaps, two major manufacturers, and total production will be down to about 70% of recent levels. Cars will be smaller, and only government restrictions on imports will allow this level of production. Although foreign manufacturers will be invited to start plants here, they will decline because of the poor economic environment, unproductive labour climate, and limited market. This will have a serious impact on secondary industries, and at least one of the present auto-producing centres will be a major depressed area.

The natural resource industries will be booming, since the dollar will devaluate to keep their products competitive internationally. However, in the case of metals, raw materials will still be produced for the secondary industries of other countries.

There will be a small group of high-technology companies, run by owner entrepreneurs, which will have succeeded in becoming internationally competitive. These will be run by people who choose to stay in Canada for personal reasons, and have developed highly specialized products that are in demand world-wide. Any major expansion of such companies will probably take place in the U.S. The Canadian firms will continue to locate in the Ottawa area.

Government will continue to be involved in direct control of postal services, electric power and other utilities, and the oil companies it has bought. It will also be supporting a number of companies that, but for government help, would have failed with serious social consequences. Ontario Hydro will be selling more power to the U.S., since its nuclear programme will have increased capacity, and load growth, domestically, will be less than forecast.

The steel industry will be doing quite well. The Nanticoke plant will be at full capacity, and Hamilton, having gone through an upgrading process, will still be a world-class producer. Algoma Steel in Sault Ste. Marie will also be modernized and competitive. Sydney Steel will be closed, together with some of the older U.S. mills. The main offshore competition will come from South Korea.

The multinationals, such as General Electric (GE), Westinghouse, Canadian Pacific (CP), AMCA International, Dow Chemical and others, will have reduced their Canadian interests, closing older plants and replacing them with new plants in other countries. In some cases, plants will be bought by Canadians, increasing Canadian ownership of production. However, they will not retain the share of export markets they held before acquisition.

In general, productivity will have decreased from 1982 levels. The 1970s will be looked on as the golden years when the standard of living reached its peak. Families will continue to struggle to maintain standards by sending more family members out to work. The government will have been forced into providing extra day-care centres, perhaps using closed schools for this purpose.

The government, whatever its party name, will be socialist in practice, and unions will have a strong voice in establishing policy. Business leaders will be disillusioned, and there will be little trust between them and government. The pressure on government to create jobs, with a prevailing unemployment rate of 12%, will have forced governments to resurrect at least some of the mega-projects that the private sector will be unwilling to sponsor. This will include one major oil sands project and at least one other energy-related project, perhaps a lignite-based power generation system fed by the deposits north of Cochrane. Depending

on timing, this will provide a 10-year period of engineering, construction, equipment and related services activity that will benefit Ontario to the extent of, perhaps, $200 billion. Since about 35% of these will have been financed by Ontario taxpayers, this will be a mixed blessing.

With slow or stagnant real expansion and, therefore, little increase in energy requirements, it is likely that energy self-sufficiency in Canada will have been reached by the turn of the century. Ontario, with increased nuclear generating capacity, developed lignite resources (perhaps), and a society that has learned over the years how to conserve more and more energy, will be much less dependent on Western and imported oil. Technology advancements in the fields of heat pumps, wind and solar energy, and the use of electricity for transportation will also further reduce dependency on oil. It is quite likely that most families will have a small electric car for local driving and a gas or diesel-powered car for other trips. Propane and hydrogen-powered vehicles may be serious competitors for gas and diesel, but this will not seriously impact production.

To conclude this particular scenario, in the year 2010, Ontario will be an unmotivated, lack-lustre province, turned in on itself. With limited exceptions in the natural resource and high-tech fields, it will not be a serious competitor internationally.

Production facilities controlled by foreign multinationals will be lost, and Canadian multinationals will expand outside Ontario.

Government will be bigger and more socialist in orientation. The government will sponsor some major energy-related mega-projects that will provide increased work, and energy, but at a cost. The country will be energy self-sufficient, and Ontario will be less dependent on imported oil.

The underlying strength of the province will be its natural resources, and iron and steel production. They will prevent the province from incurring a substantial drop in the standard of living; however, the standard of living will fall to 5% or 10% below 1970 levels.

The informal economy will increase to about 20% of the province's RDP, mainly through illegal cash transactions. The crime-related activities, such as drug trafficking and prostitution, will increase, but not as much as the more acceptable practice of failing to report income.

Population will be stagnant, and many professionals and skilled tradesmen will emigrate.

The general picture is that of a society in decline.

3.3/ Decisions and Events

The decisions or events noted in the following section are not necessarily expected to happen. An indication is given of what the results would be if they did happen. Some notes on their likelihood are added in some cases.

3.2.1/ Enhancing Production

Maintenance of good trading relations with the U.S., Canada's major export market, is important. If North America can be developed as a free market, with barriers limiting imports, particularly from Japan, this will provide Ontario with a dollar worth, perhaps, 65¢ U.S. to sell into a much bigger market. North America as a whole will be poorer, but it will minimize the impact on Ontario. This may be difficult to achieve if defensive policies result in U.S. retaliation.

Government encouragement of retraining, both for professionals and skilled tradesmen, in the form of a subsidized programme funded by a training levy on all companies, will put firms in the position of using the programme to ensure they get value from their contribution. Such a programme could make use of educational facilities that would otherwise be redundant. This programme could take the unusual step of converting surplus professionals in one area (e.g., marketing), to fill needs in another discipline (e.g., accounting or engineering). The more usual training for toolmakers, mechanics, electronic technicians, and so on, should also be covered, using a modular or credit certification system.

Although more appropriate to the expansion scenario, encouraging the successful companies will be far more effective than providing subsidies for the unsuccessful. Such a programme will have a major impact on new high-tech firms and may allow them to become world-class producers in highly specialized and focussed fields.

Although it is more desirable to create a climate where the private sector will undertake mega-projects, under this scenario it will not happen. Rather than lose these projects totally, it is better that government support them to provide the long-term energy benefits and the shorter-term job creation benefits. It is government that creates the situation under which such ventures cannot provide a commercial return; it is, therefore, proper that it should take this action.

3.2.2/ Eroding Production

The introduction of wage and price controls will remove incentives and inhibit free-market forces from shaping development as it should. It will increase the spirit of non co-operation between labour and management, perhaps the greatest single obstacle to increased productivity today.

If industries cannot compete, they deserve to fail. Supporting and protecting them through increased government intervention simply preserves the least effective firms, and uses resources that would be better used in encouraging the efficient successful companies. The result is bigger government and higher taxes.

4/ HIGH-GROWTH SCENARIO

4.1/ Key Features

In this scenario, it is assumed that there is more rapid growth, that relations between East and West improve, and that the Third World countries are improving their economies rapidly with help from the industrialized countries.

This is an exciting environment, and implies a spirit of confidence in the long-term future of Canada and Ontario. In such an environment, investment in Canada will increase, including foreign investment. This will inevitably mean that the current spirit of economic nationalism will have been replaced with a more balanced internationalism. FIRA will have been disbanded. This must be so since the expansion can only have occurred through the influx of large amounts of foreign capital. Although Canadians may be willing to provide more risk capital in this environment, this alone will not be sufficient, and outsiders, particularly foreign multinationals, must be allowed to contribute.

Ontario industry will be competing in world markets. Multinationals will have expanded their operations and specialized or focussed their production units. Thus, exports from these units will be much higher, as will imports from focussed factories outside the province and the country.

Canada will have learned the lesson that every new international competitor, such as Japan, South Korea, Taiwan, Singapore, Indonesia and, to a lesser extent, China, is also a new market. Canadian companies will have learned how to do business in these Pacific Rim countries and will maintain offices and subsidiaries in them, or will work through trading companies that have local knowledge.

People will be encouraged to try and do better. Productivity will increase. The standard of living will be higher than it is now and should continue a modest growth rate of 2% per year. Looking at the last two decades, a 2% annual increase in productivity is reasonable and about

average. Looking at individual companies, it is seldom that an organization is seen where 10% is not achievable, so there is no doubt that the potential exists. Although the trend for more family members to join the workforce will continue, it will be gradual and will be motivated by a need for personal fulfillment, rather than by economic necessity. This will still require the provision of increased child-care services.

There will still be an increase in demand for personal services as people will wish to use their leisure time for recreation rather than household chores. This will provide for an increase in legitimate businesses such as "The Blue Army" and "Molly Maid."

The expanded tax base and the non-interventionist role of government (necessary to achieve this scenario) will lead to less government and lower personal income taxes. The conclusion on the non-interventionist role of government is based on the belief that only a free market environment can generate the growth in this scenario. This will put less pressure on people to under-report income, and since there will be more people normally employed, the informal economy will not grow and may even shrink by 1% or 2%. Crime-related activities should also not grow, since in a healthy society, people are less likely to seek self-gratification through these channels and are more likely to fulfill themselves through work, family and normal recreation.

An increase in recreation-related industries is likely, with resorts, sporting goods companies, and sailboat manufacturers, for example, experiencing above-average growth.

Skilled professionals and tradesmen will be in strong demand. The reward system will be structured to encourage people to take the training necessary to fill this demand. There will still be a considerable shortfall and need for government initiative to promote retraining. There should be no net loss of skilled people through emigration; there may be a small gain with more entering than leaving Canada.

With an international outlook, and participation in research and development, Canada will be in the forefront of new development. This will mean early automation of hazardous, unpleasant and socially demeaning jobs.

An important part of this will involve the use of robots and North America, as a whole, will start to lead in this field.

There will be a greater move towards employee participation programmes of the quality circle type. This will be accompanied by greater job security and more sharing of a company's gains with its employees. This increased partnership between labour and management will be essential to increasing productivity, which, in turn, is essential to expansion. Unions that can see clearly will accept and welcome this situation, recognizing that it serves both their members and the company. They will move from the present strong adversarial role to a more co-operative participative role. There will be managements and unions who will find the change hard to make. Some unions will cling to the adversarial role since they feel this is their power base and they need a steady stream of grievances to give them purpose. Some managers will continue to be dictatorial and unwilling to allow employees to participate. These will be in the minority and will disappear, in time, due to competition from more successful companies.

Wage settlements will be greater than inflation, which should settle at around the 8% level currently being experienced in Japan, and since real incomes will be increasing, negotiations should be less bitter, resulting in fewer work stoppages.

Since Canada's industries will be competitive internationally and national resources much sought after, the dollar should strengthen. This will affect some labour-intensive industries, which may virtually disappear. It would be a mistake to protect these industries since this would only provoke retaliation in other competitive areas. It would be far better to allow the laws of relative efficiency to prevail and concentrate efforts on making successful companies even more successful.

There will be a place for both the world-scale plant and the small founder-operated company. The size of a world-scale plant is hard to define. It is much bigger in the auto industry which has, say, 5000 employees and where huge capital sums are involved for long model runs, than in the electronic components industry where a plant employing a few hundred employees could supply a market's needs.

The change to a more participative management style will tend to reduce the size of operating units. Conglomerates and multinationals will meet this need through more decentralization. Except for the auto industry and steel production, a single unit of 1000 employees will be considered large and will be unusual. This is to allow for faster response, more involvement, self-fulfillment and commitment and, from these, greater productivity.

There could be some geographical shifts in population. Resource industries will be encouraged to develop both at home and abroad. This will result in mineral discoveries in totally new areas that will be developed and form new communities. In spite of this, the Elliot Lake mining community will not survive, since uranium needs can be filled more cheaply from Saskatchewan, Australia and British Columbia which will lift the current ban on uranium mining. Apart from resource industries, population distribution will not change significantly.

Ontario will be a strong steel producing centre and, as in the other scenario, and for the same reasons, the stronger dollar may make competition a little tougher; steel companies will need to work on productivity and technology to stay in front.

Auto production will remain a strong force in the Ontario economy. Under the pressure of foreign competition, quality and productivity will have improved so that North American cars can retain about 70% to 75% of the North American market. Imports will come from Japan, Germany and South Korea. The gas and diesel engine will still predominate, with the electric car an important element. There will be limited use of propane- and hydrogen-powered cars. It is possible that, through acquisition, the "big three" will become the "big two," but it is unlikely that any auto-based community will be particularly hard hit as a result.

Unemployment should fall to about 5%, which is effectively the lowest that can be achieved given our imperfect system of measurement and normal turnover, and Ontario will retain its position with Alberta and British Columbia of being one of the prosperous provinces.

Eating out will increase at all levels, including the middle to upper price-range establishments. This increased disposable income and generous expense accounts will put the emphasis on quality and service, rather than value.

Technology advances will continue to outstrip the ability of people and companies to use them. Companies will make vigorous efforts to overcome this problem through internal training programmes and the government will provide generous assistance. In some cases, this will not be successful and employees will have to be placed in other jobs appropriate to their ability. Again, the government can assist in this. This will reduce the lag-time by some years and allow companies to reap the benefits of new technology earlier. It is unlikely that the same experience will be repeated with units for home use, for example, Telidon. This will still proceed slower than the optimistic forecasts of those in the business and will require a generation change.

Increased purchasing power will result in change in demand. People will look for more options rather than utility. For production units, this means flexibility must be designed into products and processes so that different models can be made in the same plants. Computer-aided design and manufacturing, using value analysis and group technology, will be common tools in the effort to give the customer what he wants at a reasonable price.

Housing will not boom, since population growth will be minimal. It should continue at a steady rate, with mortgage rates in the 10% to 12% range and prices in line with 1981 figures in real terms. Rental accommodation of good quality will still be in short supply for the low-income tenant. This will be a less serious problem than today but the only answer appears to be subsidized housing.

The shortage of skilled people may promote overseas recruiting. This could well involve an influx of highly qualified Asians to Canada. In time, these people will fill positions of responsibility in industry. This could add some variety to management style and help to reinforce the movement to participative management.

As mentioned before, production units, except where vast capital investments are essential, will tend to be smaller and more independent of their parent organizations. Size will be dictated by the optimum to produce at internationally competitive prices. Big is not beautiful.

The birth rate will continue to decline and, as in the other scenario, there will be more older people to support. This burden can be more easily carried by the better-paid working population. This, naturally, will have an impact on services for the elderly, which will grow.

Government will decrease as a percentage of GDP, but not significantly. The party in power will have a good chance to remain in power for several consecutive terms and will be generally popular with the people.

4.2/ Summary -- Production in 2010

In the same way that negative policies snowball, continuing positive policies tend to reinforce each other. The principal factor in industrial expansion is confidence, and this is something that takes time to grow. Implicit in this scenario, therefore, are stable long-term policies encouraging investment.

Ontario (and Canada) will be more productive and will be exporting to, as well as importing from, Japan, South Korea and Taiwan, as well as traditional trading partners in the U.S. and Europe. There may be increased trade with Soviet Bloc countries and China, but this is not likely to be significant except in the case of wheat, which will have little impact on Ontario. Both governments and companies will realize the importance of physical presence in these export markets and will maintain trade missions and offices there on a full-time basis.

Government and industry will have learned to work together, and jointly sponsored training programmes will be filling the need for skilled tradesmen, such as toolmakers, electricians, and instrument mechanics.

There will also be a sponsored programme under which professionals can be "retreaded" to fit the changing needs of industry. The tendency, when a company needs to increase its accounting department, for example, will be to retrain surplus staff from another department. This ability to retrain will allow companies to repay loyal service with job security and will result in a structure more concerned with people than with functions. The present educational facilities (and others specially purpose-built) will be fully utilized in this retraining mode and in general education requirements which will be reduced because of a decline in the numbers of school-age children.

Geographically, there will be few differences. Elliot Lake will have become a ghost town, with a minimum of tourist activities remaining. This will have been more than offset by the opening of two new mining centres, discovered and developed as a result of policies aimed at attracting investment into Ontario.

There will be one or two new industrial centres located in areas where government incentives have persuaded companies they should locate. One of these will probably be a new high-tech centre, matching the expanded centre at Kanata. Apart from these, most of the growth will have occurred around existing centres, and Toronto will still be far the most important of these. Hamilton will still be steel city and, through continuing modernization, will be stronger in world markets than it is now. Nanticoke, operating at capacity and starting to expand, and Algoma Steel in Sault Ste. Marie will also be doing well.

Although the increase in the population of old people will have increased the demand for nursing homes and other services, the strain on the social system will not be overwhelming. Government will have decreased as a percentage of the GNP because of its policies of less involvement; this, combined with the broader tax base, will allow the needs of the elderly to be paid for more easily. The prosperity of the previous 15 years will have also allowed many of the elderly to accumulate savings, thus reducing the burden on the social system. Since there will have been real growth, some savings vehicles will have been developed to provide real gains in savings after inflation.

The auto industry, as a result of some traumatic experiences in the '80s, will have learned to compete with the Japanese and, also, with the South Koreans, who will have become a world-class manufacturer. Cars will be generally smaller, with a high proportion (perhaps 30%) of electric-powered vehicles. There will still be a limited demand for medium to large gasoline-powered vehicles, particularly for large families (of which there will be few) and for driving long distances.

Of the original big three, there will be only two auto companies after the troubles of the '80s. They will have grown in the '90s through exports to Europe, newly industrialized countries and even to Japan, but will only have about 70% of the domestic market. In line with trade agreements, imports to and exports from the U.S. will be roughly in balance. Plants that were closed in the '80s will be reopened in the '90s, in some cases, through acquisition by foreign auto manufacturers.

Natural resource companies, with the exception of uranium mines, will be flourishing, and secondary industries will be established to process these resources. Many of these will be foreign-owned and will have located here because of the friendly investment climate and relatively cheap supply of electricity.

The federal government will continue to run the Post Office and Air Canada, but very much at arm's length. Petro-Canada will still exist, but will not have tried to dominate the Canadian industry. It will be principally a listening post through which the government stays in touch with the industry.

The multinationals will be booming and no longer looked on as "robber barons." They will have been encouraged to set up plants in Ontario and will have greatly added to the wealth and tax base. They will have tended to set up specialized world-class plants in different countries and, naturally, will have chosen Canada for those plants having high electrical energy needs, and for making use of resource products.

There will have been a steady growth in productivity and living standards since 1990, and year-over-year improvements will be running at 2%. This will have been achieved through a revolution in labour relations. The union representation of employees will have increased to about 40%, but there will be a much more co-operative attitude between labour and management. This will have developed following the depression of the mid-1980s when, in return for lower wage settlements, employees were often granted a share in the company's results. This took the form of productivity or profit sharing, and for the first time, a true partnership between labour and management was formed. Participative management styles, such as quality circles, also became very popular and broke down the traditional barriers still further. It is this partnership that will have brought back vitality to the production system, resulting in an upward trend in productivity.

The government, following a non-interventionist policy, will be clearly conservative in nature. It will not have grown and, in fact, may represent less of the GNP than it did in the '80s.

Unemployment has fallen to 5%, which is considered, in practical terms, to be the minimum achievable.

Two mega-projects will have been developed in the West, sponsored by consortia of private companies. This will have provided a boost to the southern Ontario economy, as much of the equipment and supplies will have come from Ontario plants. Other projects will be under study and may be a steady source of business for the following 10 to 20 years.

Energy self-sufficiency will have been achieved, although it will be cheaper to export oil and gas in the West, and buy offshore in the East. Oil and gas will be trading at world prices, so there will be no penalty associated with this.

To conclude this scenario, in the year 2010, Ontario will have a vibrant, motivated economy that sees itself filling a place in the world of international trade. New international competitors also provide new markets, and Canada will be aggressive in securing its share of these. In a

basically free market, Canada's natural strengths of abundant resources and energy will have put it in a strong position. Many foreign firms will have taken advantage of this by locating plants in Ontario.

A smaller, conservative government will allow non-competitive industries to fail and will provide incentives to growing, successful companies. These incentives will be designed to help the formation of new companies in competitive fields and will not provide continuing subsidies. The people they need will come from the non-competitive industries.

The country will be energy self-sufficient and will have achieved this through the private sector.

The standard of living will be growing at 2% per annum. More people will be working, many through a need for fulfillment, rather than economic necessity.

There will be a small growth in population but this will be insignificant in economic terms.

The general picture is that of a small country that has found its place in the world and made the best of its assets.

4.3/ Decisions and Events

4.3.1/ Enhancing Production

Free trade agreements with most countries of the world will permit relative efficiency benefits to work to the advantage of everyone.

Training of professionals and skilled people will be a priority. Government must co-ordinate this, with industry paying the cost.

Incentives should be provided to encourage investment in new plants, and foreign investment welcomed. These can take the form of accelerated write-offs, low-interest loans, and reduced taxes for the first production periods. It should never take the form of a continuing subsidy.

Immigration policies allowing skilled people to enter Canada will help to fill a growing shortage.

Government grants to aid in implementing the results of research and development may encourage the use of ideas and techniques that would otherwise go elsewhere for commercial development.

4.3.2/ Eroding Production

Protecting industries that cannot compete internationally ties up resources, including skilled workers, that could be more effectively used by other industries.

Wage and price controls should be unnecessary and would completely inhibit growth if introduced. Growth is totally dependent on an equitable reward.

The climate will be right for private industry to develop mega-projects. Government would simply be less efficient at it.

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